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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,614	09/23/2003	Thomas Eschbach	8358-000010	1502
27572	7590	05/19/2004	EXAMINER	
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 828 BLOOMFIELD HILLS, MI 48303			MUROMOTO JR, ROBERT H	
			ART UNIT	PAPER NUMBER
			3765	

DATE MAILED: 05/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary****Application No.**

10/668,614

**Applicant(s)**

ESCHBACH ET AL.

**Examiner**

Robert H Muromoto, Jr.

**Art Unit**

3765

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 September 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>05052004</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Priority***

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Germany on 3/30/2001. It is noted, however, that applicant has not filed a certified copy of the German application as required by 35 U.S.C. 119(b).

### ***Claim Rejections - 35 USC § 102/103***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 5, 7, 9, 10, and 12 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Hirabayashi et al., US patent 5,275,434.

Hirabayashi discloses, "The airbag A is formed of a generally circular doubly woven cloth W which includes circular front and rear side (singly woven) cloth parts 1, 2. The front and rear side cloth parts 1, 2 are integrally woven so as to be

integral with each other at their peripheral portion P though the front and rear side cloths 1, 2 are shown separate from each other in FIG. 1. Thus, the front and rear side cloth parts 1, 2 are fixedly secured at their peripheries with each other to form a bag-shaped structure defining thereinside a gas chamber to be supplied with high pressure gas. In other words, in the weaving of the doubly woven cloth W, first and second warp yarns 1a, 1b are used in which the first warp yarns 1a are for the front side cloth 1 while the second warp yarns 1b are for rear side cloth 2. Additionally, first and second weft yarns 3a, 3b are used in which the first weft yarns 3a are interlaced with the first warp yarns 1a to form the front side cloth part while the second weft yarns 3b are interlaced with the second warp yarns 1b to form the rear side cloth part 2.

In the doubly woven cloth W of the example of FIG. 1, each warp yarn 1a of the front side cloth part 1 and each warp yarn 1b of the rear side cloth part 2 are arranged to form an angle  $\theta$  of about 45 degrees therebetween. The warp yarns and the weft yarns 1a, 3a, 1b, 3b are selected to have respectively suitable coefficients of extension or elongation percentage (col. 3, lines 4-69)."

"In this embodiment, reinforcement warp yarns 5a are woven into the front side cloth part 1 in a manner to extend parallel with the first warp yarns 1a. Additionally, reinforcement weft yarns 5b are woven into the front side cloth part 1 in a manner to extend parallel with the first weft yarns 3a. The reinforcement warp and weft yarns 5a, 5b are prepared separately from the first warp and weft yarns 1a, 3a and are smaller in coefficient of extension (elongation percentage) than the second warp and weft yarns 1a, 3a.

Additionally, the reinforcement warp and weft yarns may be higher in tensile strength than the warp and weft yarns 1a, 3a. It will be understood that the reinforcement warp yarns 5a are interlaced with the first warp yarns 1a while the reinforcement weft yarns 5b are interlaced with the first weft yarns 3a. Thus, the front side cloth part 1 of the doubly woven cloth W is woven with the first warp and weft yarns 1a, 3a and the reinforcement warp and weft yarns 5a, 5b (col. 4, line 1-20)."

The recitations above from Hirayabashi clearly disclose a two-ply, one-piece airbag as recited by the instant invention. Hirayabashi also discloses that in certain zones of the fabric where reinforcement is needed that reinforcing warp and weft yarns are woven in predetermined areas to provide increased strength by using yarns with lower coefficient of extension and higher strength with no change in the weave design (weft set). The instant invention attempts to remedy the same problem by using yarns of higher linear density (dTex). However all factors staying the same, simply increasing the linear density of yarn of the same material would result in a yarn with higher strength. So the limitations of the instant invention with regard to the use of higher dtex weft yarns is inherent to the Hirayabashi airbag.

In the alternative, it would have been obvious to one of ordinary skill in the art of textile engineering at the time of invention to recognize that use of a higher dtex yarn of the same material would result in a stronger yarn.

Claims 2, 4, 6, 8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirabayashi '434.

Although Hirabayashi teaches essentially all of the limitations of the claims above, there is no specific teaching with respect to the use of 25% higher dtex weft yarns nor the addition of a third higher dtex reinforcement weft yarn.

With respect to the limitation of weft yarn linear density (dtex), the specification contains no disclosure of either the critical nature of the claimed limitations nor any unexpected results arising therefrom, and that as such the limitations were arbitrary and therefore obvious. Such unsupported limitations cannot be a basis for patentability, since where patentability is said to be based upon particular dimensions or another variable in the claim, the applicant must show that the chosen variables are critical. In re Woodruff, 919 F.2d 1575, 1578, 16 USPQ2d 1934 (Fed. Cir. 1990). One having ordinary skill in the art would be able to determine through routine experimentation the ideal levels of weft yarn dtex for a particular application.

Additionally, the addition of a third higher dtex weft yarn is considered an obvious variant. The teachings above have already established using reinforcement weft yarns in predetermined areas of need in a fabric. Simply adding another stronger weft yarn or reinforcement zone would have been obvious to one of ordinary skill in the art.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirabayashi in view of Iseki '601.

Although Hirabayashi teaches essentially all of the limitations of the instant invention, there is no specific teaching with respect to the use of monofilament yarns in the weft direction.

However, Iseki teaches an inflatable seat belt that uses monofilament yarns in the weft to take advantage of monofilament yarn's inherent stiffness.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to use monofilament yarns in the weft of a fabric that requires some stiffness such as airbags.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. References have been cited which teach air bags and inflatable restraint systems.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert H Muromoto, Jr. whose telephone number is 703-306-5503. The examiner can normally be reached on 8-530, M-F.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Calvert can be reached on 703-305-1025. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Bhm  
May 6, 2004

  
JOHN D. CALVERT  
SUPERVISORY PATENT EXAMINER  
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